

### REMARKS

Claims 2, 5-11, and 26 are pending in the present Application. Claim 5 has been canceled. New claims 27-34 are added and are supported by the original claims.

I. The rejection under 35 U.S.C. § 112 of dependent claim 5.

Claim 5 has been canceled.

II. The obviousness rejection of independent claim 2.

Claim 2 stands rejected under 35 U.S.C. § 103(a), as allegedly obvious in view of Wilkins, 6,12,254.

Wilkins discloses two examples shown in Figs. 4 and 5, see column 8 lines 19-47.

In the example shown in Fig. 4, the source used was a nominal 10  $\mu\text{m}$  diameter microfocus source, and the source to sample and sample to film distances were both 700 mm.

On the other hand, in the example shown in Fig. 5, a normal fine focus source of diameter 0.1 mm (100  $\mu\text{m}$ ) was used, the source to sample distance was 120 mm and sample to film distance was 1000 mm.

*As results of these two examples, Wilkins teaches that a normal fine focus source of diameter 0.1 mm would have a projected size of approximately the length of the 0.1 mm scale bar shown on the photograph and so largely smear out this contrast, see column 8 line 44-47.*

As a conclusion of the above examples, Wilkins admits and teaches specifically that "To give observable contrast that the source is preferably of a very small effective size, say less than of order 20  $\mu\text{m}$ ", see column 9 lines 10-11.

Thus, Wilkins specifically teaches away from using the source "size D" having a diameter of 100  $\mu\text{m}$  to 600  $\mu\text{m}$  as claimed in claim 2.

Accordingly, it would not have been obvious for a person skilled in the art to conduct the refraction contrast enhancement by using the source having a diameter of 100  $\mu\text{m}$  to 600  $\mu\text{m}$  because Wilkins specifically teaches away from this limitation in order to obtain "observable contrast" that is not "largely smeared out".

Furthermore, Wilkins teaches nothing about a technique to determine the source to sample distance R1 (m) in accordance with the diameter D ( $\mu\text{m}$ ) of the source.

Namely, in Wilkins, D and R1 are as follows:

	D	R1
Example in Fig. 4	10	0.7
Example in Fig. 5	100	0.12

According to the formula recited in claim 2, R1 for D is to be as follows:

	D	R1
Example in Fig. 4	10	0.015 to 5
Example in Fig. 5	100	0.46 to 5

In Example in Fig. 4, D of 10  $\mu\text{m}$  is out of claimed range of 100  $\mu\text{m}$  to 600  $\mu\text{m}$ .

In Example in Fig. 5, R1 of 0.12 m is out of claimed range of 0.46 m to 5 m for D of 100  $\mu\text{m}$ .

Therefore, Wilkins teaches nothing about the claimed ranges of D and R1 recited in claim 2.

In the Office Action, the Examiner asserts that Wilkins teaches a focal spot size of 100  $\mu\text{m}$  and the source-to-object distance of 0.7 m.

However, these numerals are combined by being picked up from different examples in Figs. 4 and 5 in the light of claimed ranges of the present invention. Therefore, such combination is an impermissible combination due to improper hindsight of the claimed range.

In the present invention, by using a size D of the source relatively larger than that of Wilkins, by determining R1 (a distance between the source and an object) in accordance with the size of the source and by providing R2 (a distance between the object and a detector), an edge of the image is *unexpectedly enhanced* as demonstrated in the Declaration by Mr. Honda which was submitted with AMENDMENT dated on November 7, 2003.

Thus, the *above unexpected result* would not have been obvious over Wilkins.

It is also requested that any next Office Action not be made final because applicants amendments have not necessitated a new search, i.e., claim 2 has not been amended and Wilkins is a newly cited reference. See premature final rejection rules under MPEP 706.07(a).

Applicants have also cooperated with the Examiner and filed an RCE as recommended by the Examiner and have withdrawn their appeal in order to cooperate with the Examiner who had indicated in the past that this invention had merit. Applicants encourage the Examiner to telephone the undersigned before issuing any final rejection in order to determine if any claim amendments can be made by telephone for example.

**III. New claim 27-34**

Is based on and supported by claim 2 at least. The dependent claims are based on the current dependent claims. No new matter is added.

**IV. Conclusion**

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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